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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/386,847	08/31/1999	SHIGEKI WATANABE	837.1209/JDH	1867
21171	7590	05/12/2004	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			MOONEY, MICHAEL P	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 05/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/386,847

Applicant(s)

WATANABE, SHIGEKI

Examiner

Michael P. Mooney

Art Unit

2877

Am

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 17 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19, 22-26 and 34-40 is/are pending in the application.
- 4a) Of the above claim(s) 20 and 27-33 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10, 14-19 and 21-26 is/are allowed.
- 6) ☒ Claim(s) 11 and 34-40 is/are rejected.
- 7) ☒ Claim(s) 12 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Prosecution on the merits of this application is reopened on claims 11, 34-40 are considered unpatentable for the reasons indicated below:

The "X" reference(s) provided in the International Search Report supplied in the IDS that was received 5/28/03 are found to be applicable to some of the claims. See the rejection below.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11, 34 are rejected under 35 U.S.C. 102b as being anticipated by Watanabe (JP407098464A).

Watanabe '464 teaches a polarization beam splitter (PBS) having 1st 2nd and 3rd ports, said 1st port being supplied with signal light including 1st and 2nd polarization components respectively having 1st and 2nd polarization planes (PP) orthogonal to each other, and with pump light, said 1st and 2nd ports being coupled by said 1st PP, said 1st and 3rd ports being coupled by said 2nd PP; and

A polarization maintaining fiber (PMF) having 1st and 2nd ends, and having a polarization mode (PM) to be maintained between said 1st and 2nd ends, said 1st end being optically connected to said 2nd port so that said 1st PP is adapted to said PM, said

Art Unit: 2877

second end being optically connected to said 3rd port so that said 2nd PP is adapted to said PM. (Figure 9).

Thus claim 11 is met.

Watanabe '464 teaches a polarization beam splitter (PBS) having 1st 2nd and 3rd ports, said 1st and 2nd ports being coupled by a 1st polarization plane (PP), said 1st and 3rd ports being coupled by a 2nd PP orthogonal to said 1st PP; and

A polarization maintaining fiber (PMF) having 1st and 2nd ends, the 1st end connected to the 2nd port and the 2nd end connected to the 3rd port, and having a polarization mode (PM) to be maintained between said 1st and 2nd ends, said PMF being supplied with signal light (SL) including 1st and 2nd polarization components respectively having said 1st and 2nd PPs, and with pump light;

said SL being converted into converted SL by nonlinear optical effect based on said SL and pump light in said PMF. (Figure 9).

Thus claim 34 is met.

Claims 35-40 are rejected under 35 U.S.C. 102b as being anticipated by Watanabe (EP 0776103A2; i.e., EP '103)

Watanabe '103 teaches 1st and 2nd optical fiber (OF) networks each adapted to wavelength division multiplexing (WDM); and a converter connected between said 1st and 2nd OF networks, said converter converting optical signal light (SL) by nonlinear

Art Unit: 2877

optical effect based on said SL and pump light, wherein said SL is WDM SL obtained by WDM a plurality of optical signals having different wavelengths and arranged at unequal intervals. (p. 3 line 59 to p. 4 line 8; p. 5 lines 16-21; p. 9 line 38 to p. 10 line 58; p. 11 line 52 to p. 12 line 31; figs. 4-6+; figs. 15, 17).

Thus claim 35 is met.

Each and every element of claims 36-40 are taught in EP '103 at, e.g., p. 3 line 59 to p. 4 line 8; p. 5 lines 16-21; p. 9 line 38 to p. 10 line 58; p. 11 line 52 to p. 12 line 31; figs. 4-6+; figs. 15, 17.

Thus claims 36-40 are met.

Allowable Subject Matter

Claims 12-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1-10, 14-19, 21-26 are allowed.

The prior art, either alone or in combination, does not disclose or render obvious a device including an optical circulator having 1st 2nd and 3rd ports...a polarization beam splitter having 4th 5th and 6th ports, said 4th port being optically connected to said 2nd port...in combination with the rest of claim 1.

The prior art, either alone or in combination, does not disclose or render obvious a device including an optical circulator having 1st 2nd and 3rd ports...a polarization beam

Art Unit: 2877

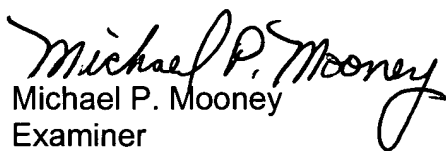
splitter having 4th 5th and 6th ports, said 4th port being optically connected to said 2nd port...in combination with the rest of claim 14.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1562.


Michael P. Mooney
Examiner
Art Unit 2877


Frank G. Font
Supervisory Patent Examiner
Art Unit 2877

FGF/mpm
4/27/04